basis. 123/ Analysts predict that cable modem subscribers will continue to outnumber DSL customers for the foreseeable future. 124/

These figures are also consistent with the situation in Qwest's in-region service area.

Qwest has about 450,000 DSL subscribers in its in-region territory, signifying a market share of approximately 26 percent in its region. Cable modem providers operating in Qwest's in-region service area, however, have 63 percent of that market.

Cable modem service has also outpaced DSL in terms of growth. According to the *Third Advanced Services Report*, the number of high-speed cable modem subscribers grew 45 percent in the first half of 2001, while DSL subscribers increased by only 36 percent during that period. Meanwhile, satellite and fixed wireless experienced a growth rate of 73 percent during that time. Moreover, SBC points out that in areas where cable modem service and DSL competed head-to-head, customers tend to choose cable. 126/

Cable modem dominance is partially due to the fact that economic and technical factors have enabled cable modem service to be much more broadly available than DSL. 127/ Analysts

Third Advanced Services Report, App. C, Table 4. The 35 percent share is for all DSL services and "other wireline" services, which includes some T1 services and some DSL lines provided by

See SBC Petition at 40, Table 2.

FCC Releases Report on the Availability of High Speed and Advanced Telecommunications Capability, FCC News Release, at 2 (Feb. 2, 2002). The five largest cable companies added 624,000 broadband Internet subscribers in the third quarter of 2001, while the five largest DSL providers added only 392,000 broadband Internet subscribers during the same period.

 $<sup>\</sup>frac{126}{}$  SBC Petition at 38-39.

See Bringing Home the Bits (indicating that of the 52.4 percent of Internet users to whom wireline broadband access was available as of May 2000, about 16.9 percent of these users had broadband access available *only* via cable modem service, according to a survey performed by the General Accounting Office).

have estimated that, by the end of 2001, cable modem service would be available to about 70 percent of U.S. homes, while DSL would be available to approximately 45 percent of those homes. Another estimate suggested that DSL would be available to less than 50 percent of households by the end of 2001, but cable modem service would pass 82 percent of households by that date. High speed services over satellite are already available in most areas of the United States, and MDS systems reach about 55 percent of the U.S. population. 130/

Put in context, these market share comparisons clearly demonstrate that Qwest and the other ILECs lack market power in the broadband mass market. When it was declared non-dominant for domestic long distance services, AT&T possessed a market share of about 60 percent, and for some routes its market share was much higher. Although market share is itself not necessarily indicative of market power (because rivals' supply elasticity can readily undermine any market power that market share might otherwise confer), the *lack* of a substantial market share generally reflects the absence of market power. As the Commission has

<sup>128/</sup> Third Advanced Services Report at 21-22, 23 ¶¶ 46, 51.

J.P. Morgan Securities, Inc. and McKinsey & Company, Broadband 2001 — A Comprehensive Analysis of Demand, Supply, Economics, and Industry Dynamics in the U.S. Broadband Market, at 43, Chart 25, Table 6 (Apr. 2, 2001). In fact, it is unlikely that DSL will ever be able to reach more than two thirds of the total households in the United States, due to its technical limitations. See SPR Report at 13.

 $<sup>\</sup>frac{130}{}$  Third Advanced Services Report at 26-27, 33 ¶ 61, 77.

<sup>131/</sup> AT&T Reclassification Order at 3307  $\P$  68.

<sup>132/</sup> Id.

See AT&T International Reclassification Order at 17976 ¶ 34 ("[M]arket shares, by themselves, are not the sole determining factor of whether a firm possesses market power. Other factors, such as demand and supply elasticities, conditions of entry and other market conditions must be examined to define a relevant market, and determine whether a particular firm can exercise market power in the relevant market").

recognized, a company's ability to raise its prices while restricting its output usually requires a large market share, 134/ which Qwest and the other ILECs do not possess in this market.

#### 2. Elasticity

While the ILECs' lack of a dominant share of the broadband mass market should be enough to find them non-dominant, the demand and supply elasticity of the market provides an equally compelling basis for this finding. As noted above, cross elasticity of demand refers to customers' willingness to switch to other providers in the market when prices rise. Survey data from the Strategis Group indicates that 8 percent of broadband users would be willing to switch between cable modem and DSL service for a \$5 monthly discount, another 24 percent for a \$10 discount, and an additional 28 percent for a \$15 discount. Another Strategis Group survey shows that broadband users would be willing to consider fixed wireless services as an alternative to DSL if they were priced \$20 lower per month than their current service. 136/ Moreover. providers often offer comparative information regarding DSL and cable modem offerings, and customer satisfaction surveys typically seek information from subscribers to both types of service, suggesting there is a strong perception that cable modem and DSL services are substitutable. 137/ In light of this cross elasticity, if Qwest or another ILEC attempted to raise its prices for DSL by any significant degree, it is evident that its customers would simply choose another broadband alternative, such as cable modem, satellite, or fixed wireless service.

<sup>134/</sup> LEC Classification Order at 15803  $\P$  83.

SPR Report at 5.

<sup>136/</sup> *Id.* 

<sup>137/</sup> Id.

High supply elasticity in the broadband mass market further confirms the ILECs' lack of market power. Supply elasticity refers to the extent to which existing or new competitors in the relevant market can absorb a carrier's customers so as to make a unilateral price increase unprofitable. In the *AT&T Reclassification Order*, the Commission relied heavily on its finding that AT&T's competitors had enough excess capacity to constrain AT&T's pricing behavior, because they could add a significant number of new customers if AT&T unilaterally raised interstate long distance prices. The Commission noted that "in the interstate, domestic, interexchange market, supply is sufficiently elastic to constrain AT&T's unilateral pricing decisions" because AT&T's competitors "have or could quickly acquire the capacity to take away enough business from AT&T to make unilateral price increases by AT&T unprofitable." Moreover, in the *AT&T International Reclassification Order*, the Commission declared AT&T non-dominant for international service to four countries where AT&T faced no competition, based on the existence of "potential competition" which could "ensure that prices continue[d] to remain just and reasonable." 140/

The same reasoning applies here. Given the cable modern providers' growth rate of 45 percent in the first half of 2001, these carriers surely have the capacity to absorb immediately, or within a short period of time, a substantial portion of the DSL customers served by Qwest and the other ILECs. Moreover, because cable modern providers' costs are generally *lower* than those of DSL providers, 141/1 they would clearly be capable of entering or increasing capacity in

 $<sup>\</sup>frac{138}{}$  AT&T Reclassification Order at 3303-04 ¶¶ 58-60.

<sup>139/</sup> Id. at 3303 ¶ 58.

<sup>140/</sup> AT&T International Reclassification Order at 17998 ¶ 96

See JP Morgan and McKinsey & Co., Broadband 2001, A Comprehensive Analysis of Demand, Supply, Economics, and Industry Dynamics in the U.S. Broadband Market, April 2,

any market where a DSL provider attempted to unilaterally raise prices above competitive levels. And because at least 69.2 percent of households with television already *receive* cable service, <sup>142/</sup> providing these consumers with cable broadband would not even require any new buildout; their homes already are "cable ready," thus facilitating the cable operator's ability to serve the customer quickly. Moreover, CLECs, satellite companies, and fixed wireless providers could also absorb ILEC customers, as noted above. <sup>143/</sup> Thus, supply in the broadband mass market is sufficiently elastic to constrain unilateral pricing decisions by the ILECs.

#### 3. Cost Structure, Size, and Resources

The cost structure, size, and resources of the ILECs also do not give them any advantage over their competitors that gives them market power in the mass market. If anything, the ILECs' falling market share relative to cable modem service suggests that they are disadvantaged relative to their broadband mass market competitors. Those competitors include large, well-established companies, such as AT&T, AOL Time Warner, Comcast, Cox, and Cablevision. Each of these companies has the size and resources to compete successfully against the ILECs, which the market share data recited above shows they have done.

Qwest and the other ILECs also do not possess a cost advantage relative to their mass market competitors. To the contrary, the cost of deploying DSL significantly exceeds the cost of

<sup>2001,</sup> at Charts 43 and 44; see also NTIA, Cable Technology and Services: How A Cable System Works, at http://www.ncta.com/pdf\_files/A-HowaCableSystemWorks.pdf ("[T]he incremental cost of upgrading coaxial cable plant with fiber for high speed data access and telephony is less than the comparative cost for telephone companies to upgrade their twisted-pair copper networks to provide similar broadband video and data applications").

See NCTA Industry Statistics, at http://www.ncta.com/industry\_overview/indStat.cfm?indOverviewID=2. Note that this data reflects the percentage of television homes with cable service as of December 2001, and that the current figures are likely to be higher.

<sup>143/</sup> See supra note 56.

upgrading cable plant. A recent analyst report also found that cable's cost advantage will continue well into the future. Thus, Qwest and the other ILECs clearly do not possess cost structure, size, or resources that would confer them market power in the broadband mass market.

## C. Qwest and the Other ILECs Lack Market Power in the Provision of Broadband Services to Larger Businesses Under All Tests Used by the Commission.

The ILECs also do not possess market power in the provision of broadband services to larger business customers. Qwest and the other ILECs are minor players in this market, compared to competitors such as AT&T, WorldCom, and MCI, which together hold more than two-thirds of the market. The ILECs' lack of market power is confirmed by the other factors in the Commission's market power analysis.

#### 1. Market Share

The market for larger business broadband services is highly competitive. It is dominated by the largest long distance providers — AT&T, WorldCom, and Sprint — who collectively have nearly 70 percent of the market for frame relay and ATM services. In comparison, Qwest's market share in terms of revenues is less than 5 percent. Together, as of year-end 2000, the ILECs account for roughly 16.9 percent of the market for frame relay services and roughly 17 percent of the market for ATM services. This data is not surprising, given that Qwest and other BOCs cannot provide interLATA frame relay or ATM services — which is what most large

See JP Morgan and McKinsey & Co., Broadband 2001: A comprehensive Analysis of Demand, Supply, Economics, and Industry Dynamics in the U.S. Broadband Market, Charts 43 and 44 (Apr. 2, 2001).

See SBC Petition, Crandall/Sidak Declaration at ¶ 106; IDC Packet Switching Report at Figures 9, 31 (AT&T, WorldCom, and Sprint together accounted for about 65.8 percent of revenues for ATM, and 68.4 percent of revenues for frame relay in 2000).

See IDC U.S. Frame Relay and ATM Market Update (2001). Based on preliminary market data, Qwest believes these numbers did not change significantly in 2001.

business customers demand <sup>147</sup> – without section 271 relief. Moreover, even where BOCs have obtained such relief, their section 272 affiliates must compete as new entrants against well-established, facilities-based IXCs, while the RBOC's ILEC operations are still constrained by the LATA. <sup>148</sup> CLECs are also offering services in the broadband larger business market, providing an additional source of competition. <sup>149</sup>

#### 2. Elasticity

The demand and supply elasticity attributes of this market provide further evidence of the ILEC's lack of market power. With regard to demand elasticity, the Commission has previously found that demand of larger business customers is highly cross elastic given that such customers are very sophisticated and knowledgeable purchasers of telecommunications services who are aware of the competitive alternatives. The characteristics of these customers means that cross-elasticity of demand is even higher than similar market shares would suggest in a consumer market. This conclusion applies equally to broadband services purchased by such customers.

Qwest's own experience is that roughly 80 to 85 percent of the frame relay or ATM services it bids on are interstate based.

While ILECs can bid out interLATA frame relay and ATM services, in conjunction with an independent IXC (or CLEC) even without section 271 relief, the ILEC would provide only the intraLATA portion of the service, and the IXC would be providing the larger portion of the service. In any event, in Qwest's experience, customers tend not to favor these arrangements, finding them expensive and unwieldy, and poor competition to the offerings of the nationwide IXCs.

See Yipes Communications, Yipes Announces Nationwide Availability of Instantly Scalable Bandwidth (Sept. 11, 2001) ("Yipes Communications, Inc. [is] the defining provider of optical Gigabit Ethernet networks"); US LEC Announces ATM/Frame Relay Network Utilizing Lucent Switching Platform, at http://www.uslec.com/press/061199.htm; Wayne Kawamoto, Williams Expands Global Offerings, at http://www.clec.planet.com/news/01jan2002/18williams.html (reporting that Williams Communications announced the launch of its ATM and frame relay services).

AT&T Reclassification Order at 3306  $\P$  65.

Given the quantities of their purchases, these customers exert significant buying power, typically by soliciting competitive bids before procuring such services. Large business customers therefore clearly would notice and respond to any attempt by an ILEC to institute a unilateral price increase.

In addition, the ILECs' competitors possess sufficient capacity to prevent an ILEC from unilaterally raising prices. These competitors could absorb immediately, and without additional investment, significant numbers of an ILEC's DSL customers. As noted, cable modem service passes more than 80 percent of the population, but little of that capacity is being used. This excess capacity indicates that cable operators could absorb most, if not all, of an ILEC's DSL customers with minimal additional investment. 151/

#### 3. Cost Structure, Size, and Resources

As in the mass market, Qwest and the other ILECs do not enjoy any advantages over their competitors in terms of cost structure, size, or resources that "preclude the effective functioning of a competitive market." In fact, the ILECs' inability to provide larger business broadband services on an interLATA basis places them at a major disadvantage vis-à-vis their competitors.

As noted, the major competitors in this market are the three largest IXCs. Each of these carriers has a vast nationwide and international network. Because ILECs do not share the same reach, they are hampered in their ability to compete with the IXCs. The scale of the IXCs' business also gives them a cost structure advantage. In addition, unlike the BOCs, the largest IXCs can provide broadband services on an interLATA, as well as intraLATA basis, across the

See SBC Petition, Crandall/Sidak Declaration at ¶ 72-76.

See AT&T Reclassification Order at 3309 ¶ 73.

nation, which as described above, allows them to tie together the disparate geographic locations that characterize many large businesses. Thus, far from possessing an advantage in this market, Qwest and the other ILECs are at a significant disadvantage relative to their competitors, which further confirms their lack of market power.

#### D. The Commission's "Leverage" Test for Potential Market Power

The Commission has noted that even if a carrier does not *currently* have market power under the traditional four-factor test, the carrier still could be deemed, for regulatory purposes, to have market power if the Commission finds that it may be in a position "increas[e] its rivals' costs or . . restrict[] its rivals' output through . . . control of an essential input, such as access to bottleneck facilities, that its rivals need to offer their services" — and thereby "gain the ability to raise prices [in the relevant market] by restricting its own output [of the new service]." Thus even where the Commission does not find that the ILEC already has attained market power in the new market, the Commission has observed that it would be prepared to find that the ILEC nonetheless should be regulated as dominant because it could leverage its power in the local exchange market to quickly *gain* market power in the new market "upon entry or soon thereafter." 155/

In general, in undertaking this analysis, the Commission has looked to whether the incumbent carrier could use its existing market power in the local exchange market to improperly allocate its costs, unlawfully discriminate against its competitors, and/or engage in a price

Notice at  $\P$  28.

<sup>154/</sup> Second Report at ¶¶ 83, 111.

<sup>155/</sup> LEC Classification Order at 15802, 15810, 15812 ¶¶ 83, 96, 98.

squeeze. The Commission has specifically asked in the *Notice* whether ILECs have the "ability and incentive to use their market power in the local exchange and exchange access markets to unfairly disadvantage rival suppliers of broadband services. . .[by] charging higher prices to rivals for essential inputs, providing rivals with poorer quality interconnection, imposing unnecessary delays, or discriminating against rivals inappropriately in other ways."

In particular, the Commission has asked about ILEC special access services, which the Commission suggests may be critical to competitors' broadband services. 

158/

Even as it raises these questions, however, the Commission has recognized that "intermodal competition can reduce the likelihood of anti-competitive behavior" because intermodal competitors are not dependent on the ILECs' facilities. And indeed, in the broadband market, intermodal competition, as well as the presence of several facilities-based alternatives even within the same mode of service, has had exactly the effect that the Commission describes. Whatever "leverage" ILECs may have has produced no edge for the ILECs in the broadband market whatsoever. The Commission's test therefore should be readily satisfied. And even if the experience of several years were not sufficient to moot this discussion, it is clear that the presence of significant, inter- and intramodal facilities-based competition makes it highly unlikely that the ILECs would be able to gain market power through "leverage" in the future.

<sup>156</sup> *Id.* at 15812 ¶ 98.

<sup>157/</sup> *Notice* at ¶ 29.

<sup>158/</sup> Id.

<sup>159</sup> *Id.* at ¶ 30.

<sup>160/</sup> Id. at 18.

1. The Facilities-Based, Intermodal Competition in the Broadband Services Markets Make It Unlikely that the ILECs *Could* Attain Market Power Through "Leveraging" Local Exchange or Exchange Access Market Power.

It is clear that, given the nature of the competition within all segments of that market, ILECs do not and will not have the ability to make use of any leveraging power in the foreseeable future. Competition in the broadband mass market is primarily *intermodal* and substantially facilities-based, so the ILECs' competitors are generally not dependent on the ILECs' local exchange or exchange access facilities or services. The ILECs therefore cannot even theoretically use control over those facilities to discriminate against competitors in the broadband market. Although CLECs do use ILEC facilities to provide DSL, and competitors in the business market sometimes do utilize the ILEC's facilities and services, there are a multitude of alternate providers of all the relevant facilities and services that constrain the ILEC from exercising any kind of local exchange or exchange access bottleneck power to obtain dominance in the broadband market.

In the *LEC Classification Order*, the Commission recognized that "in reality," the primary way that a BOC's dominance in the local exchange or exchange access markets could provide its affiliate with the "leverage" to obtain market power in the long distance market would be if the "BOC's improper allocation [or other exercise of "leverage"] enabled a BOC interLATA affiliate to set retail interLATA prices at predatory levels (*i.e.*, below the costs incurred to provide those services), drive out its interLATA competitors, and then raise and sustain retail interLATA prices significantly above competitive levels." This test clearly cannot be met in the broadband market, for several reasons.

<sup>161/</sup> LEC Classification Order at 15815 ¶ 103.

First, as discussed above, the ILECs' broadband services rivals have significant advantages in terms of their size, cost structure, and market share that make it inconceivable that the IECs could "drive [them] out" of the market at any point in the foreseeable future. In the mass market for broadband services, these competitors are large, well-established companies such as Cox Cable, Comcast, and AT&T; in the large business market for broadband services, the ILECs' rivals are primarily the major IXCs, including AT&T, Sprint, and WorldCom. These competitors all have markets that are either nationwide or cover large areas of the country far greater than any individual ILEC's service region. Even in the unlikely event that an ILEC could somehow make it more difficult to compete within its region, these competitors, who generally face no prohibitions on cross-subsidizing across their own large regions — or between different services that they offer even with the individual ILEC's region — undoubtedly would have the resources to survive any such efforts. As the Commission found in the LEC Classification Order with respect to the large national IXCs, "[t]hese are large well-established companies with millions of customers throughout the nation. It is unlikely, therefore, that a BOC interLATA affiliate, whose customers are likely to be concentrated in the BOC's local service region, could drive one or more of these national companies from the market." The same finding applies here.

Second, of course, as an economic matter, it is unlikely that even if an ILEC could force one of its competitors out of the market by temporarily raising that competitor's input costs and decreasing its own prices, the ILEC could then raise prices in the broadband market to anticompetitive levels. To begin with, for this to occur, the ILEC would have to succeed in pushing out *all* its competitors. As noted below, this would be highly unlikely given that in most cases

<sup>162/</sup> Id. at 15818 ¶ 107.

the ILECs' rivals have little if any dependence on any ILEC services or facilities, in which case it would be impossible for the ILEC to raise their costs. Accordingly, merely pushing one — or even one group — of rivals out of the market would ultimately not permit the ILEC to raise prices: the remaining competitors would be poised to win over the ILECs' customers as soon as the ILEC raised prices, by undercutting the ILEC's new supra-competitive rates.

Furthermore, because so many of the ILECs' competitors are facilities-based, it is highly unlikely that the ILEC could eliminate them as *potential* competitors even if it managed to force them from the market temporarily. For example, were an ILEC able somehow to force its cable modem competitor from the broadband market altogether (though obviously not from the cable television market), the cable provider could quickly re-enter the cable modem market as soon as the ILEC attempted to raise prices above competitive levels. The cable operator's cable modem facilities presumably would remain in place in the cable system, ready to be used for renewed competition as soon as the ILEC's higher rates provided an attractive profit margin. In the *LEC Classification Order*, the Commission considered this a sufficient protection from potential "leverage"-based market power even if the IXC might leave the market *altogether*: as the Commission noted, "the facilities of that [IXC] would remain intact, ready for another firm to buy at distress sale prices." 163/

Indeed, although the Commission has asked whether it should distinguish between markets in which intermodal competition does not yet exist and those where it does with respect to whether ILECs might be able to leverage their local market power into the broadband market, across the country,

<sup>163/</sup> LEC Classification Order at 15814 ¶ 102.

Notice at  $18 \, \P \, 31$ .

and, where the profit margins are sufficient — as they would be if an ILEC tried to price its broadband services above "competitive levels" — there is little to prevent cable operators from upgrading their plant to provide cable modem services. As noted, the costs of serving additional and new cable modem providers is typically lower than the cost of serving the same subscriber with DSL, providing cable modem providers with a readily attractive entry strategy to compete against their DSL rivals and offer their consumers lower prices. Similarly, IXCs offer frame relay and ATM services across the country — or could do so readily. Even if the ILEC's facilities would for some reason be necessary to provide special access to specific individual customers, a whole panoply of regulations, such as the nondiscrimination obligations of section 201, directly govern the pricing and other terms of providing such facilities. Moreover, dominant carrier regulation itself offers little or no protection against most forms of discriminatory provisioning of facilities.

Third, the intermodal, facilities-based nature of the competition in the broadband market makes it simply implausible that the ILECs could obtain "leverage-based" market power through discrimination or a price squeeze in connection with any broadband services inputs over which the ILECs exercise control. The ILECs' mass market broadband services competitors — cable modem, satellite, and wireless broadband providers — typically do not use the ILECs' facilities or services at all in connection with their broadband services. Thus, there is not even a theoretical possibility that ILECs could discriminate against these competitors "though poorer

See Suketa Mehta, Telcos: Answering the Call for ATM, LAN Magazine, Mar. 1, 1996 (reporting that an AT&T spokesperson stated that AT&T's ATM network can offer service "virtually nationwide" and "wherever a customer is, we'll get them into the network").

<sup>166/</sup> LEC Classification Order at 15804  $\P$  85.

quality arrangements or unnecessary delays" or subject them to a price squeeze — much less affect competition in the broadband services market through such practices.

The same is true with respect to the large business market: the large IXCs often provision their *own* special access services or the equivalent functionality. Moreover, there are alternative providers in the market for such services. For example, as of August 20, 2001, CLECs had deployed 635 local fiber networks in the largest metropolitan statistical areas nationwide, and more than 200,000 local fiber miles. Thus, were the ILEC to try to raise special access prices, even intramodal competitors that might consider using the ILEC's facilities or services likely could simply turn elsewhere, leaving the ILEC with little ability to affect the broadband services market. 169/

Finally, the risk of ILECs abusing their provision of the "input" services used by some broadband competitors is remote, given the panoply of regulatory constraints that apply to ILECs' basic services. As an initial matter, to engage in predatory pricing, an ILEC would have to engage in cross-subsidization that would permit it to recover some of its costs for broadband services by raising its rates for the local exchange services or facilities over which it allegedly has market power. But, of course, Qwest and other ILECs are subject to price caps and other forms of regulation that would prevent them from "recoup[ing] misallocated nonregulated costs

<sup>167</sup> Id. at 15812 ¶ 111.

<sup>168/</sup> See SBC Petition, Crandall/Sidak Declaration ¶ 52, 62.

Indeed, given the prevalence of other facilities-based alternatives "that can and often do substitute for ILEC offerings," even if an ILEC were to attempt to distort the market for inputs to other providers (or wholesale customers) that rely on the ILEC's services or facilities, it is likely that other independent, facilities-based providers, seeing a possibility to earn revenue from their own excess capacity, would rush to fill the void, offering attractively priced alternatives to the ILECs' services or facilities. See SPR Report at 14.

by raising basic service rates." Moreover, even in the absence of dominant carrier regulation
— indeed, even in the absence of the obligations imposed on ILECs under section 251 of the
Act, ILECs, like all carriers, are and will remain obligated to offer services at rates, terms and
conditions that are just, reasonable, and non-discriminatory. 47 U.S.C. §§ 201(b), 202(a). This
provision, on which the Commission has relied for years to ensure that all carriers provision
services in a fair and just manner, is sufficient to ensure that the threat of leverage-based market
power will be adequately policed by the ILECs' rivals, and addressed swiftly by the Commission
itself — thus reducing the ILECs' ability to influence even the intramodal market for broadband
services. 1711/

### 2. Any "Leverage" the ILECs Have Has Not Produced Market Power Despite Several Years of ILEC Provision of Broadband Services.

In the *LEC Classification Order* the Commission was concerned about whether newly created BOC long distance affiliates might, upon or shortly after creation, have the ability to quickly gain market share because of the ILECs' control over the exchange access market: by raising prices or otherwise discriminating in its provision of access services to its competitors, the Commission reasoned, the BOC affiliate might be able to drive out its interLATA competitors, and thereby gain the power to raise and sustain prices in the interLATA market

Notice of Proposed Rulemaking, Implementation of the Non-Accounting Safeguards of Section 271 and 272 of the Communications Act, as amended; and Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area, 11 FCC Rcd 18877, 18942-43 ¶ 136 (1996).

In any event, if the Commission's concern really is preventing the ILEC from abusing its control over local exchange or exchange access services, dominant carrier regulation ultimately accomplishes little or nothing in this regard. Instead, the panoply of state and federal regulation governing ILECs provision of local exchange and exchange access services are adequately designed to serve this role.

soon after entering that market. The Commission ultimately determined that, even though the BOCs' competitors generally do rely on the BOCs for access service as an essential input for their interLATA services, there was no basis to conclude that dominant carrier regulation was necessary to prevent BOCs from leveraging their power in the access market into power in the interLATA market. 173/

That conclusion applies with even greater force here. Indeed, the Commission need not even undertake the detailed analysis in which it engaged in the LEC Classification Order—although, as noted above, that analysis does demonstrate the absence of any likelihood that market power could be obtained through leverage. Unlike the interLATA market, Qwest and the other ILECs are not new entrants to the broadband services market. While the Commission's test with respect to the potential impact that leverage might have on the ILECs' ability to quickly gain market share might have been relevant in the context of the new or yet-to-be created BOC long distance affiliates, it is entirely irrelevant in the context of ILECs' several years of experience of in the broadband services market. The fact that ILECs have not used any "leverage" they possess in the local exchange or exchange access markets to acquire market power in the broadband market to date is strong evidence that they cannot quickly, or even ever, do so.

As noted above, for example, after more than four years of providing DSL, ILECs' DSL services still have a smaller percentage of all broadband subscribers than do cable modem providers, and ILEC frame relay and ATM market shares still pales in comparison to those of the three major IXCs in its region. Thus, far from having used their leverage to drive away

<sup>172/</sup> LEC Classification Order at 15812, 15815, 15829 ¶ 98, 103, 125.

<sup>173/</sup> Id. at 15812-32 ¶¶ 98-130.

competitors, the ILECs have instead faced *increasing* competition. Nor is there any evidence, for example, that *any* ILEC has priced its DSL services at predatory levels at *any* point, let alone sustained such pricing for a sufficient period to eliminate competitors. And, notwithstanding the Commission's specific request for comment about ILEC potential to abuse their "dominance" of their in-region special access services, this clearly has never produced a sizeable or remotely "dominant" market share in the frame relay and ATM markets — in which AT&T, Sprint, and WorldCom remain predominant. 175/

As discussed above, the fact is that potential leverage is and has been irrelevant in the face of the significant intermodal and facilities-based competition that exists, and is increasing, in the broadband services market. And there is nothing about today or tomorrow's market that makes it more likely that what has *not* happened over the past several years *will* happen tomorrow: to the contrary, as competition increases, the risk of ILECs obtaining market share through leveraging any market power they have in the local exchange or exchange access markets will become increasingly remote.

Indeed, as SBC notes, its DSL services tend to be priced above the cable modem services offered in the same market. SBC Petition at 67. And in general, DSL prices have reflected the uncertainties of the market and the costs of overregulation; they certainly have not been predatorily underpriced. See Jason Ankeny, CHEAP SPEED; As Broadband Prices Rise, Will Consumers Keep Up?, Upstart, Jul. 1, 2001 (noting that several DSL providers have raised their prices in response to the current economic slump); see also Vikas Bajaj, Phone Competition Thriving, SBC Says: Rivals Sell Big Chunk of Business Services in Cities that Company Services, CEO Says, The Dallas Morning News, May 17, 2001 (stating that SBC's chairman said SBC had to increase DSL rates because of the regulatory costs imposed on it).

See, e.g., AT&T Corp., High Speed Packet Services, AT&T Frame Relay and ATM Services, at http://www.ipservices.att.com/brochures/atm.pdf ("As the frame relay market leader, AT&T has the largest frame relay network").

#### IV. APPROPRIATE REGULATORY FRAMEWORK

Given the robust, facilities-based competition in the broadband services market, and the clear absence of market power on the part of the ILECs, the only appropriate regulatory framework is to treat all providers alike and thus forbear from dominant carrier regulation of ILEC broadband services. It clearly makes no sense at all to subject ILECs alone to dominant carrier regulation in this market, when their market share certainly does not exceed and in many cases does not even come close to mirroring that of their competitors. The ILECs' competitors—cable modem, wireless, and satellite broadband providers in the mass market, and the major IXCs and CLECs in the business market—are all largely unregulated by the Commission in their provision of broadband services. They are certainly not subject to dominant carrier requirements, despite the fact that some of them—cable modem providers in the mass market, and the major IXCs in the business market—enjoy a significantly larger share of the broadband services market than do the ILECs.

There is simply no reason for the Commission to bestow this kind of artificial advantage on one type of competitor and not another. Such asymmetrical distinctions — based on technology, rather than actual service — frustrate competition, discourage investment, and prevent broadband deployment. And they fly in the face of the position endorsed by Chairman Powell "that we will let the market pick winners and losers and hopefully not government policy." Moreover, the policy of neutrality is in fact at the heart of the Act's pro-competitive, deregulatory orientation, particularly for broadband. 177 Indeed, in the broadband services

Chairman Michael K. Powell, Remarks to SUPERCOMM 2001, June 6, 2001, at http://www.fcc.gov/speeches/Powell/2001/spmkp104.html (emphasis added).

Section 706(c)(1) of the Act requires the Commission to take an approach to developing "advanced telecommunications capability" that is "without regard to any transmission media or technology." See notes following 47 U.S.C. § 157.

market, "[f]lexible service-centric approaches that tolerate technology diversity are essential, because broadband-delivered services are subject to faster change and greater variation . . . than are conventional services." Regulatory disparity has produced little benefit and significant cost: forbearance from dominant carrier regulation of ILEC broadband services is thus timely and essential.

Once the Commission recognizes that the ILECs lack market power in the broadband market and should be treated as non-dominant, the only sensible approach is to forbear from dominant carrier regulation with respect to their provision of all broadband services in all markets, however defined. The Commission has repeatedly found that it should forbear from applying tariff requirements for services provided by carriers that are found to be nondominant. That is true even if ILECs remain dominant in the provision of some services; the Commission has on many occasions classified carriers as dominant in their provision of some services, but not in others.

Indeed, under Section 10(a) of the Act, the Commission *must* forbear from applying any regulation or provision of the Act (including the Section 203 tariff requirement) if: (1) enforcement of such regulation or provision is not necessary to ensure that the charges, practices,

<sup>178/</sup> Committee on Broadband Last Mile Technology, Computer Science and Telecommunications Board, Division on Engineering and Physical Sciences, and National Research Council, *Broadband: Bringing Home the Bits*, 33 (2001).

See Competitive Carrier Further Notice, 84 FCC 2d 445, 458-59 ¶ 41 (1980); IXC Forbearance Order at 20742-43 ¶ 21; CAP Forbearance Order, 12 FCC Rcd 8596, ¶¶ 23, 25.

See COMSAT Reclassification Order at 14086 ¶ 2 (granting COMSAT's request to be reclassified as nondominant for some services, and denying the request as to other services); see also LEC Classification Order (finding BOC affiliate long distance carriers nondominant for domestic long distance services); see also AT&T Reclassification Order (finding AT&T nondominant in the provision of domestic long distance services without addressing their dominance in the international services market).

classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory; (2) enforcement of such regulation or provision is not necessary for the protection of consumers; and (3) forbearance from applying such provision or regulation is consistent with the public interest. Moreover, under section 706 of the Act, the Commission is charged with the task of encouraging the deployment of broadband telecommunications services by utilizing measures which will promote competition, including, specifically, "regulatory forbearance."

As the Commission has recognized, tariff regulations typically are unnecessary and indeed inappropriate with respect to services provided by nondominant carriers. Because, by definition, "nondominant carriers cannot exercise market power, unlawful tariffs should be rare, and in those few instances in which they may occur, remedial action can be taken after the tariffs become effective" under section 208. Moreover, consumers can simply react to above-market prices by switching carriers. Thus, in a competitive market in which no carrier is dominant, tariff requirements are not necessary to protect consumers. Such requirements impose costs

Indeed, it is unclear that such requirements even address any concerns about the ability to raise prices that underlie the Commission's dominant carrier market power test, and thus that their application would be justified in the face of such market power. See LEC Classification Order at 15804 ¶ 85.

Tariff Filing Requirements for Nondominant Common Carriers, 8 FCC Rcd 6752 ¶ 23 (1993); vacated on other grounds, Southwestern Bell Corp. v. FCC, 43 F.3d 1515 (D.C. Cir. 1995).

<sup>183/</sup> IXC Forbearance Order at 20742-43  $\P$  21.

See Memorandum Opinion and Order and Notice of Proposed Rulemaking, Hyperion Telecommunications, Inc. Petition Requesting Forbearance, Time Warner Communications Petition for Forbearance; Complete Detariffing for Competitive Access Providers and Competitive Local Exchange Carriers, 12 FCC Rcd 8596 (1997).

on the ILEC and skew competition, while producing no public good to balance such harms.

Accordingly, there is no justification even for "streamlining" dominant carrier requirements: 185/
once the Commission has recognized that the requirements produce no public interest benefits
and simply impose costs, there is no possible public interest in maintaining them in any form —
whereas there is significant public interest in eliminating them altogether.

Nor should the Commission use this proceeding as an opportunity to impose additional, new requirements on ILECs in connection with their provision of broadband services. For example, any requirement that ILECs provide such services through a separate affiliate in order to be classified as non-dominant would impose a slew of *new* costs, again, to no end. It is the competitive nature of the broadband market, and the ILECs' lack of market power, that makes tariff requirements unnecessary and inappropriate, not the corporate structure of any particular ILEC.

Nor are the Computer II/III requirements necessary or relevant to the ILECs' nondominance in these markets. As the Commission has noted, it is exploring whether to maintain those requirement in the *Framework for Broadband Access NPRM*. As no doubt will be discussed in that context, the Computer II/III requirements were designed to address the BOCs' potential abuse of power with respect to communications services as to which the BOCs were dominant. And the ILECs simply have never been dominant with respect to the

 $<sup>\</sup>frac{185}{}$  Notice ¶ 41.

<sup>186/</sup> See id. ¶ 43.

See id. ¶ 43 n.95; Framework for Broadband Access NPRM at ¶ 31.

See Report and Order, Policy and Rules Concerning the Interstate, Interexchange Market Place, 16 FCC Rcd 7418, 7420-22 ¶ 4(2001) (describing Computer II and III Regime).

provision of broadband communications service. Indeed, it is simply unclear why, in the face of the protections provided under section 201 of the Act, which ensure that the ILECs, like all carriers, must provide their communications services at just and nondiscriminatory terms and rates, the Computer II/III requirements are at all necessary. 47 U.S.C. §§ 201(b), 202(a). These requirements are enforced through the complaint and enforcement provisions of 47 U.S.C. § 208. One thing is clear: while the Commission is not determining whether to forbear from the Computer II/III requirements in this proceeding, it should certainly not rely on those requirements in finding that ILECs are nondominant in providing broadband services. To the contrary: nondominance ultimately should lead the Commission to declare those requirements unnecessary.

#### **CONCLUSION**

The Commission "has long recognized that the regulations associated with dominant carrier classification can dampen competition." The costs imposed by such regulation are unnecessary where, as here, the carriers in question lack market power. In this circumstance, the Act and the Commission's procompetitive, deregulatory policies call for the elimination of dominant carrier regulation as applied to ILEC broadband offerings. This is all the more true when the regulation is unnecessary and unproductive. The Commission for years has indicated that it understands that the broadband services market was ripe for analysis and reclassification: this Commission finally has recognized that the time for such reclassification and for forbearance is now. It should accordingly proceed to act with all due speed to provide ILECs — and ultimately, consumers — with this long overdue relief.

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189/ LEC Classification Order at 15806 ¶ 88.



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March 1, 2002

#### 1. INTRODUCTION

In this proceeding, the Commission undertakes a long-overdue review of its regulatory governance of ILEC provision of retail broadband services. This review is timely given that the Commission's current rules harm competition, discourage deployment of broadband facilities and deprive customers of innovative broadband applications. The Commission cites its experience in implementing the market opening provisions of the 1996 Telecommunications Act and the birth of broadband services as the specific motivations for its review. What that experience plainly discloses are failures to promote facilities-based competition and to afford ILECs an investment-friendly regulatory environment for service innovation and deployment of new, economic welfare-enhancing technological capabilities.

"If it moves, regulate it," is not good economic policy to promote development of the new "new thing." The irony in the case of broadband telecommunications is just how lacking the putative "market-power" grounds for regulation are. The notion that power in the provision of narrowband service (power that is regulated and subject to effective erosion as a result of the 1996 Act and technological innovation from unregulated competition) justifies regulation of broadband service entails a logical non sequitur. In economic terms, a firm can hardly dominate a market it is barely in, especially one in which its technology (i.e., DSL), in general, precludes it from supplying, let alone restricting, the marginal unit of output—the sine qua non for exercise of market power and dominance.

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Similar reasoning applies to the market for broadband services provided to large business customers.

The anomaly the Commission confronts is that it asymmetrically regulates the non-dominant suppliers in broadband. In 1984, the FCC would presumably have had considerable difficulty trying to rationalize a regulatory regime in long distance that subjected MCI and Sprint to the full panoply of regulation while leaving AT&T largely unregulated. But that is, in essence, just what it is doing in broadband today. The problem is, as noted, that asymmetrical regulation is stifling the very competition that supplies the predicate for reliance on "the market" to produce good economic results. The Commission rationalizes its non-regulation of cable providers, in the face of prima facie evidence of economic dominance in the provision of "mass-market" broadband services, based on the potential effectiveness of inter-modal competition. But its current regulation of ILECs constrains the competition that purportedly justifies its light-handed regulation of cable's monopoly power.

The Commission asks how it "can best balance the goals of encouraging broadband investment and deployment, fostering competition in the provision of broadband services, promoting innovation, and eliminating unnecessary regulation." That balance can be easily accomplished for, in truth, there are no economic tradeoffs among these objectives. It is not as if fostering competition requires sacrifices in terms of promoting innovation or eliminating unnecessary regulation. This is a case where elimination of unnecessary regulation—a worthy objective of its own—will also produce each of the other desired results (viz., broadband investment and deployment, competition and innovation).

The Commission's *Notice* also notes a perceived tension between pursuit of the enumerated objectives and regulation of market power. This tension does not in fact exist or pose any genuine economic tradeoff requiring optimization by the Commission, because the ILECs do not possess market power in broadband services that would justify dominant carrier regulation.

In this paper, we follow the methodology prescribed by the Commission to adduce evidence that indicates that Qwest certainly does not possess "individual market power" in the supply of retail broadband services, the economic criterion the Commission properly specifies to denote "dominance" for purposes of assessing the need for regulation. Lack of dominance, in turn, implies that current ILEC broadband regulation is a case of "rules in search of a rationale." Moreover, such regulation actually undermines the results the Commission claims

<sup>&</sup>lt;sup>1</sup> NPRM at ¶ 7 (emphasis added).



to seek (investment, competition, innovation, elimination of unnecessary regulation, etc.).

#### 1.1. IDENTIFICATION OF RELEVANT PRODUCT MARKETS

As the Commission's *Notice* properly recognizes, customer preferences define economically relevant product markets. The fact that arable land can produce both corn and tomatoes does not place corn and tomatoes in the same product market; supply-side substitutability may possess implications for analysis of market power,<sup>2</sup> but does not connote demand-side substitutability. Analysis of demand-side substitutability is the standard approach to market definition, consistent with economic theory<sup>3</sup> and enforcement of competition policy by the antitrust authorities.<sup>4</sup>

The evidence on demand-side substitutability we provide here indicates that customers regard various broadband communications services as substitutes for one another, but do not regard narrowband "dial-up" services as close substitute alternatives. There is a clear "chink in the chain" of substitutes as between broadband and narrowband services, but not among various broadband alternatives. This implies that these two types of services do not trade in the same economically relevant product market.

Whether it makes analytical sense to further divide the market depends on several additional considerations. Most notably, when different customer classes possess different sets of alternatives they perceive as closely substitutable for one another, the dimensions or boundaries of the economically "relevant" product market may differ as among the different customer classes. The economically relevant product market *is* the set of services perceived to be close substitutes for one another. When different sets of services are perceived by different sets of customers to be close substitutes, the definition or boundaries of the product market, *relevant* for, say, an assessment of market power, are different. For example, if customer A possesses additional or different alternatives than

<sup>&</sup>lt;sup>2</sup> Thus the fungibility of arable land in cultivation of different crops limits the exercise of economic power in the market for any single crop.

<sup>&</sup>lt;sup>3</sup> In economic theoretic terms, the ability profitably to raise price by restricting market supply (*i.e.*, to exercise market power) presumes a less than perfectly elastic product demand, implying the existence of some perceived limitations on product substitutability.

<sup>&</sup>lt;sup>4</sup> See, e.g., Section 2 ("Product Market Definition") of the U.S. Department of Justice, Antitrust Division, Merger Guidelines (1992). The Guidelines (Section 2.12) note that a variety of circumstantial evidence can be utilized to infer substitutability including evidence of buyers' perceptions and considerations, particular price movements and evidence of sellers' perceptions about product substitutability.



customer B, the relevant product market for customer A is broader (or different) than that for customer B; in particular, it includes the extra (or different) substitute alternatives.

This type of consideration indicates that the Commission should distinguish two relevant product markets for analysis of competition in retail broadband telecommunications services: a large business customer market for broadband services, such as ATM and frame relay; and a "mass market" for broadband telecommunications services, other than to large business users (viz., residential and small & medium-sized business customers).

The former market can be fruitfully analyzed separately from the markets for dedicated transmission facilities that are used in broadband networks. Moreover, while the transmission facilities utilized to enter/exit the ATM/frame-relay "cloud" are available from a number of different sources, nothing in this proceeding will relieve ILECs of their obligation to offer dedicated transmission facilities at regulated retail rates. This combination of competitive and regulation-conditioned offerings precludes any leveraging of control over access into control over "cloud" offerings.

In the latter market (viz., the complement set of "mass-market" users), the services supplied by various providers all easily and/or functionally substitute for one another. These include the broadband service offerings of ILECs, cable companies, CLECs and DLECs, satellite companies and terrestrial wireless Internet access providers. There is again virtually no grounds to buttress a claim of ILEC dominance in provision of these productive functionalities.

Neither of these product markets includes narrowband Internet access, because neither set of customers regards such access as a close substitute for broadband access.<sup>5</sup> Narrowband access is generally perceived as qualitatively inferior, and is unsuitable for many applications (e.g. downloading of large files that may, increasingly, contain musical or video content). At the same time, empirical studies indicate little if any actual cross-elasticity of demand between narrowband and broadband services.<sup>6</sup>

<sup>&</sup>lt;sup>5</sup> Thus, in *Merger Guideline* terms, end users would not substitute one for the other to a quantitatively significant extent were relative prices to change minimally.

<sup>&</sup>lt;sup>6</sup> For example, Hausman, Sidak and Singer concluded, using different model specifications and measurement techniques, that "[b]roadband Internet access is a separate relevant market for competitive analysis and for antitrust purposes." Their statistically estimated coefficient for the price of narrowband access was "essentially zero" and "nowhere near statistical significance." See "Cable Modems and DSL: Broadband Internet Access for Residential Customers," American Economic Review: Papers and Proceedings (May 2001) at 304.



#### 1.2. EMPIRICAL EVIDENCE ON DEMAND-SIDE SUBSTITUTABILITY

Recent customer survey data supports the existence of a relevant product market that includes all "mass market" broadband services. For example, a Strategis Group survey conducted in October 2001 (*Broadband Users: Cable vs. DSL*, 2002) indicated that broadband users would be willing to consider different types of fixed wireless as alternatives to DSL and cable modem [at 91-92]. Another survey conducted by the Strategis Group (*Broadband Users: Cable vs. DSL*, January 2001) shows that 8 percent of broadband users would be willing to switch between cable modem and DSL services for a discount of \$5 on their monthly bill, another 24 percent for a discount of \$10, and an additional 28 percent for a discount of \$15 [at 75].

Survey data also supports the exclusion of narrowband "dial-up" service from the broadband markets. Broadband generally appeals to users for whom the perceived value is high relative to the (incremental) costs entailed because of extraordinary consumption and/or work-related utility derived from the ability to transfer large computer files quickly and conveniently. For the more "run-of-the-mill" user, such greater speed and convenience are not sufficiently valued to warrant incurring the extra cost over dial-up service.

A Yankee Group 2000 TAF Survey found that broadband users typically go on line more frequently and stay on line for longer periods than dial-up users: 74 percent of broadband customers go on line seven days per week, whereas only 51 percent of dial-up customers do so. The Yankee Group 2001 TAF Survey finds that the frequency of access and time spent in each on-line session differ significantly as between broadband and dial-up subscribers. Sixty-three percent of broadband households go on line three times per day, almost twice the percentage of dial-up households (32 percent) that do so. Thirty percent of broadband households spend over two hours per on-line session, whereas only 12 percent of dial-up customers do so. The average monthly bill of Internet access for broadband households (\$40) is almost twice that of dial-up households (\$22).

The Yankee Group 2001 TAF Survey finds that "high-speed access" is the primary reason 63 percent of broadband households subscribe to broadband service and the second most important reason reported by another 15.9 percent of households. Transactional convenience (quick connection, ease of logging on, etc.) and freeing-up the phone line are other perceived benefits.

The Strategis Group survey conducted in October 2001 (*Broadband Users: Cable vs. DSL, 2002*) found that 99 percent of broadband users intend to continue the current service, with only 1 percent willing to go back to dial-up (at 74). 40 percent of current broadband households believe that "high speed access is well worth the money" and another 45 percent consider "high speed access a little expensive, but worth the money" [at 76-77].



In making their initial decision to acquire broadband, 80 percent gave very high priority to faster speed [at 24]. Other cited considerations include freeing up the phone line and always-on capability. In choosing between technologies, 86 percent of users cited "speed of performance" as the key choice-determining factor, followed by the technology's reputation and (only) then price [at 26].

These results thus confirm that broadband users would switch among various broadband alternatives given price incentives to do so, but regard broadband functionality as distinct from dial-up.

The DOJ Merger Guidelines note that such evidence of sellers' perceptions about product substitutability can supply circumstantial evidence to infer substitutability. Similarly, third-party provided product information supplying consumers with comparative assessments can also yield insights about perceived product substitutability. Even our limited web search for information about different broadband service offerings identified numerous sources supplying comparative information about DSL and cable modem offerings. Customer satisfaction surveys routinely seek to acquire information from subscribers to both types of services and to assess the comparative merits of both types of service.

As noted in the text, The Strategis Group surveys also ask respondents about the potential substitutability of wireless alternatives to DSL and cable modem.

<sup>&</sup>lt;sup>7</sup> For example, Ameritech notes that DSL "technology provides instantly available high-speed Internet access over a dedicated telephone line," whereas "cable modems offer high-speed Internet access over a shared cable television line" to support its claim that cable modems afford compromised privacy and are unable to support virtual private networks. www.ameritech.com/DSL new/content/0,5289,2,00.html. Cox Communications identifies "10 Myths About Cable and DSL Internet Technologies" including the myth that DSL Internet offerings areas fast as cable modem. See www.coxcable.com/highspeedinternet/compare Myths.asp. Whatever the merits of the claims being made, the point is that these suppliers view See also BellSouth, www.fastaccess.com/consumer/ each other's offerings as substitutes. blscfeatures.jsp; Verizon, www.verizon.com/foryourhome/dsl/whatisdsl/NLFDedicated Connection.asp: AT&T: www.cablemodemhelp.com/compare.htm: www.comcastonline.com/whatisit.asp.

<sup>&</sup>lt;sup>8</sup> A February 2000 study by Parks' Associates compares the level of satisfaction with set-up and ordering for both DSL and cable modem subscribers. See www.broadbandweek.com/news/010122/010122\_telecom\_dsl.htm. A University of California survey similarly compares satisfaction levels between DSL and cable modem subscribers. See www.sims.berkeley.edu/~sinha/papers/NetActionReport\_7\_01.PDF.



#### 2. GEOGRAPHIC MARKET BOUNDARIES

Delineation of geographic market boundaries in an antitrust context usually hinges on whether particular supply capabilities would become available in a given region were prices to rise slightly above competitive levels. A supplier may not historically have been active in a particular region, but if there are no economic constraints on its becoming active (say, a state licensing requirement or high per-unit costs of transportation), it should be included "in" the relevant market since its "proximity" constrains. Some leading commentators have remarked that issues surrounding geographic market definition may not be critical, assuming a proper competitive analysis is undertaken (i.e., one that takes adequate account of the power-constraining effects of potential market entry).

In telecommunications, somewhat different (and often practical) considerations have typically played a role in defining the geographic scope of markets relevant for addressing various regulatory issues. Thus, in contemplating the relevant scope of the service markets addressing the needs of large business customers, the Commission has often concluded that it is sensible to think in terms of a national market, notwithstanding that not all buyers and sellers operate in every region. The customers that different suppliers can effectively address and the suppliers that different customers can effectively exploit will vary in individual cases, but thinking in terms of a national orientation affords a practical means to come to grips with *generally prevailing* conditions, relevant for federal policy-making. Practically speaking, that orientation is usually going to give a reasonable answer regarding the availability of substitute alternatives in any particular set of circumstances.<sup>10</sup>

<sup>&</sup>lt;sup>9</sup> Thus, if geographic market boundaries are drawn narrowly, there will be significant "compensating" potential for entry from suppliers "outside" the market boundaries as specified; if boundaries are drawn broadly, such suppliers are "in" the market from the outset and their presence is reflected in market share statistics. The same conclusion regarding the presence or lack of market power may be reached simply by different means. *See* Landis and Posner, "Market Power in Antitrust Cases," *Harvard Law Review* (March 1981).

<sup>&</sup>lt;sup>10</sup> For example, MVPD markets are local, but national share statistics provide a reasonable proxy for average conditions prevailing in individual local markets. No doubt they overstate, say, the satellite share in some markets (e.g. in New Jersey) and understate it in others (e.g. in Montana), but in the absence of large variations provide a reasonable summary statistic for summarizing the generally prevailing market structure relevant for federal policy formulation.



We thus believe that the geographic market for provision of broadband services to large business customers should be regarded as national in scope. This characterization can generally be relied upon to provide a reasonable portrayal of generally prevailing supply conditions, which is what is relevant for gauging the policy-relevant extent of competition.

We, similarly, would suggest that it is useful to adopt a "nationwide standard" for competitive analysis of provision of broadband services to mass-market users. While there may be some differences in supply conditions prevailing in different areas, most end users have a choice of at least two providers; cable modem service is, and will most likely always be, more widely available than DSL; and, on average, it is less expensive to upgrade cable plant than telephone plant to provide broadband services. Moreover, as in the case of the FCC's assessment of competition in local cable and MVPD markets, aggregate nationwide statistics provide reasonable evidence of conditions prevailing on average in particular demand settings and germane for federal policy formulation in the case of the "mass" market for broadband service. 12

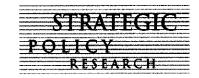
### 3. LACK OF ILEC DOMINANCE IN RELEVANT MARKETS

The relevant economic standard for imposing dominant-firm regulation should not be simply the existence of "market power," but a finding of market dominance (viz., individual market power)<sup>13</sup> plus an additional finding that regulation is likely to do more good than harm. In markets for new product and service innovations, where the prospect of significant reward is what supplies the economic incentive to sink large and risky capital investments and operating

<sup>&</sup>lt;sup>11</sup> Indeed, given the extent to which business "globalization" has already occurred, for many enterprises even this hypothesized scope may be too narrow to embody adequately all relevant substitute alternatives and supply requirements. Given the low costs of transmission with packet technology, switching capabilities can be located anywhere, thus supporting a broad geographic market definition.

<sup>&</sup>lt;sup>12</sup> In the case of cable and MVPD markets, the Commission infers *local* market conditions on the basis of national *average* statistics.

<sup>&</sup>lt;sup>13</sup> See Notice, ¶ 13. ("With the introduction of competition into former monopoly markets, the Commission recognized the benefits of streamlining regulation of carriers that lacked individual market power.")



flexibility supplies an important means for "building a market," <sup>14</sup> it is clear that any benefits of dominant carrier regulation are overshadowed by the attendant harm of such regulation.

"Individual market power," the Commission's entirely apposite term, means what it connotes—the power of an *individual* supplier to raise the market price and earn more than transitory profits, *i.e.*, ability profitably to restrict *market* output. Certainly a firm may possess market power and not be a dominant firm; indeed, the vast majority of firms in the economy possess at least a modicum of market power (in the sense of not being pure "price takers—as are, say, FCC Commissioners and Staff when they buy tomatoes or sell stock), but they can hardly be said to be dominant in economic terms.<sup>15</sup>

An economically dominant firm must be such a large player in the economically relevant market that it can restrict output at the margin to such a substantial extent that its output restriction cannot be effectively offset in timely fashion (i.e., sufficiently rapidly to make the restriction not economically worthwhile) by actual or potential competitors. Only in this case does it possess unilateral power to raise the market price and ostensibly make a profit from so doing.

ILECs are far from being in a dominant position in the relevant broadband service markets. While the alternatives large and non-large users can avail themselves of differ, in neither relevant market are ILECs in a position to exercise individual market power.

Large Business Market. In the market for provision of broadband services to large business customers, many other suppliers besides ILECs operate in the market and ILECs do not have a dominant share of the market. In addition, barriers to entry into this market are low since a large number of firms can provide the requisite switching capabilities. ILECs are thus non-dominant in the large business market for broadband services. Finally, the ability of competitors to offset a hypothetical output restriction is supplemented by regulation. The

<sup>&</sup>lt;sup>14</sup> Both the "old" and "new" theories of economic growth emphasize the prospect of reward as the engine of investment and wealth creation. The writings of Schumpeter and Romer provide respective illustrations.

<sup>&</sup>lt;sup>15</sup> See John Haring and Kathy Levitz, "What Makes the Dominant Firm Dominant?," FCC Office of Plans & Policy Working Paper Series, Number 25 (April 1989). ("Ultimately, if the only thing that prevents firm B (or C or D) from taking business from firm A is its (or their) willingness to quote a sufficiently low price, there is no economically relevant sense in which firm A can be said to be 'dominant'." Haring and Levitz go on to say, "...it is important to recognize that the regulatory rules that formerly made sense may no longer be justified. In particular, when no firm can be uniquely categorized as dominant, no asymmetric assignment of regulatory liabilities can be legitimately defended. A new market environment calls for new rules.")



special access transmission "paths" affording means of entry and exit to competitively provisioned virtual network "clouds" are offered at regulated rates and there is thus no ability to exercise market power to limit competition in broadband cloud provision.

Mass Market. In the mass market for broadband services, DSL is available to fewer households than cable modem, lags far behind cable modem (by about 1-2) in number of subscribers, and lacks the reach of emerging satellite alternatives. Given that investments in infrastructure by these other providers have already been sunk, there are low barriers to entry, *i.e.*, expansion of service. Indeed, given the well-understood disabilities of existing DSL technology in terms of customer reach and other technical limitations, ILECs will, generally speaking, not even be in a position to *offer* the marginal unit of output to non-large users in any particular local market and, hence, not be especially well-positioned to withhold it. So, there exist competitive market constraints that discipline any putative ability on the part of ILECs to restrict market output.

#### 3.1. EMPIRICAL EVIDENCE ON LACK OF ILEC DOMINANCE

The relevant market for provision of broadband services to large users is served primarily by the large long-distance carriers (AT&T, WorldCom and Sprint) which are competitively advantaged by their unique ability to provide inter-LATA service throughout the country and thus to address the business requirements of large enterprise customers with numerous and disparate locations. They currently account for about 70 percent of the ATM/Frame Relay market.<sup>17</sup>

It is hard to see how any carrier can be characterized as exercising individual market power in this market—if anyone is dominant it must be the long-distance carriers taken collectively. It is particularly difficult to understand how the ILECs can be fairly characterized as dominant, given their minimal market presence and inability to compete with providers who can on their own offer nationwide

<sup>&</sup>lt;sup>16</sup> Cf. a representative local residential market where the cable operator and the ILEC networks pass by virtually all homes, and where the cable network can deliver service to all the homes passed and the ILEC network to, say, one-third of the homes due to the disabilities of DSL. In these circumstances, the ILEC cannot be dominant since it lacks the ability to restrict output to any of the homes—both those alternatively supplied by the cable operator and those to which it cannot provide DSL. The ILEC cannot exercise market power against the homes to which it cannot supply service. It is plainly senseless to talk about "restricting" output whose supply is infeasible in the first place. Under the assumed conditions, therefore, the cable operator might reasonably be characterized as economically dominant since it seemingly possesses the power to restrict output at the relevant market margin—power the ILEC does not possess.

<sup>&</sup>lt;sup>17</sup> See SBC Communications Inc., "Comments," In the Matter of Deployment of Broadband and Advanced Telecommunications Services, Docket No. 011109273-1273-01 (Dec. 19, 2001) at 24.



connectivity. Since Internet traffic traverses LATA boundaries and with few exceptions, the ILECs are excluded from carrying it, the ILECs are severely handicapped in meeting these needs. Not surprisingly, AT&T's third-quarter earnings report (October 23, 2001) states that the amount of ATM traffic over its network had doubled over the past 12 months, mostly due to Frame Relay to ATM Service Interworking ("FRASI").

Large users also have an increasing range of technology platforms from which to choose. Many large-enterprise customers continue to shift traffic away from legacy networks towards IP networks, both public and private. Results from a recent survey of IT/telecom Directors in 171 large companies (with over 500 employees) by the Yankee Group (U.S. Telecommunications Survey Results: It's Back to Business, January 29, 2002) shows the current breakdown of Network/IP traffic and expectations for 2003:

	2001	<b>Expectation for 2003</b>
PSTN	7%	6%
Private Line	25%	21%
FR/ATM	28%	23%
Public Internet	15%	16%
IP VPN	12%	16%
Gigabit Ethernet	11%	14%
Satellite	2%	4%

A major technology breakthrough for the large business market is the extension of Gigabit Ethernet into the metro areas. In addition to highly competitive prices for bandwidth, it has the advantage of ease of implementation for corporate staff already skilled in managing Ethernet LANs. Several well-funded start-ups (Yipes, Telseon, Cogent, XO, FiberCity, GiantLoop) are offering services, each with a different business model, targeting certain kinds of customers provided they are within one-quarter of a mile of the core fiber infrastructure. Many of them lease dark fiber from companies such as Metromedia Fiber Networks to move quickly into many tier1 MSAs.<sup>18</sup>

<sup>&</sup>lt;sup>18</sup> The rapid increase in fiber availability from IXCs, CLECs and specialized dark fiber companies is documented in United States Telecom Association, Comments In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98). In the short span of two years, Yipes achieved a presence in 21 MSAs, Cogent is currently in 12 and expanding to 20, and XO is in 60 MSAs.



In large part the recent success of point-to-point Gigabit Ethernet has been based on providing connectivity to Internet data centers and storage service providers and, relatedly, disaster recovery services.

The growth of IP networks and Gigabit Ethernet is part of an evolution of network topology in metropolitan areas, away from the ILEC central office and centered on "carrier hotels" (such as Equinix, and InterNAP) and private Network Access Points (NAPs), such as Palo Alto Internet Exchange (PAIX), where the IXCs, Internet backbone providers and Internet service providers exchange traffic via peering or transit arrangements. As more traffic is exchanged at these interconnection points, the different carriers, ISPs and large companies are effectively bypassing the ILECs' infrastructure.

In addition, the Internet backbone providers have been investing in Internet data centers in all the major MSAs to promote use of their backbones, in some cases, with acquisitions such as that of Digex and Intermedia by Worldcom. Worldcom's chief technology officer Fred Biggs is quoted by Eric Krapf<sup>19</sup> as saying that, rather than bringing the fiber to the customer, WorldCom wants to bring the customer to the fiber. Specifically, he says:

In many respects, data centers are really a different way of providing that last mile. Instead of bringing a DS3 or OC-3 from a central office to a customer's location, we now literally put [their data center] right on top of the backbone—it may be a piece of fiber from a server over to our backbone, dozens of feet inside a data center...The connectivity is good, but we are going to offer a whole class of customer service on top of that network and that's where the real value-add comes and what we focus on.

In addition to point-to-point services, Ethernet is expanding into enterprise wide area networks where it "promises to simplify configuration management by eliminating the need to configure multiple frame relay or ATM virtual circuits."<sup>20</sup>

When The Yankee Group surveyed large companies (U.S. Telecommunications Survey Results: It's Back to Business, January 29, 2002) and asked companies to identify their primary and secondary service providers, 40 percent of companies

<sup>&</sup>lt;sup>19</sup> See "Fiber Access: The Slog Continues," Business Communications Review (August 2001) at 41.

<sup>&</sup>lt;sup>20</sup> See Tony Rybczynski, "Optical Ethernet—Preparing for the Transition," Business Communications Review (October 2001) at 54.



identified AT&T as their primary provider, followed by Sprint (12 percent), Worldcom/UUNet (12 percent) with ILECs far behind.<sup>21</sup>

Mass Market: Turning to the mass market, various analyses indicate that slightly more than 80 percent of U.S. residence households now have access to cable modern service. On average, DSL's reach is slightly more than 40 percent and, given its technical limitations, is probably capable of addressing on the order of 2/3 of total households in the limit. Estimates of market shares vary, but suggest that cable modern has about twice the share of DSL with about 65-70 percent of the market.

The Yankee Group 2001 Survey indicates that the suburban parts of the MSAs account for about 50 percent of all broadband users. These are precisely the areas where DSL suffers its greatest technical limitations due to the more typical long distances from ILECs' central offices; at the same time, this is naturally where cable companies have concentrated their network upgrades.

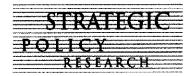
With this distribution of subscriber shares and comparative supply potential, it is hard to maintain that it is the low-share DSL offering whose suppliers "dominate." Cable's share and supply status is much more consistent with a

<sup>&</sup>lt;sup>21</sup> The market for Frame Relay was described this way in a recent article in *Fortune* magazine that focused on WorldCom: "'[Frame Relay] is everywhere and the equipment is cheap,' said Don Dietrich, a St. Louis consultant whose firm…helps multinational corporations make telecombuying decisions. Eventually companies will shift their traffic to networks based on Internet technology, he says, but they haven't yet. The good news for WorldCom: it sells a lot of frame relay service. The bad news: Frame relay prices are falling by 5% to 10% a year." "WorldCom's Bad Trip", *Fortune* (March 4, 2002) at 94.

<sup>&</sup>lt;sup>22</sup> See J.P. Morgan Securities, Inc. and McKinsey & Company, Broadband 2001—A Comprehensive Analysis of Demand, Supply, Economics, and Industry Dynamics in the U.S. Broadband Market, at 43, Chart 25 (April 2, 2001) (percentage of households with cable modem access by year-end 2001 estimated at 82 percent); and National Cable Television Association, www.ncta.com/industry\_overview/indStat.cfm?indOverviewID=2 (Sept. 25, 2001) (percentage of households with cable modem access by year-end 2001 estimated at 83 percent).

<sup>&</sup>lt;sup>23</sup> It is our understanding that Qwest's DSL service is currently available to about 36 percent of the living units in its in-region territory.

<sup>&</sup>lt;sup>24</sup> "At the end of 2002, there are estimated to be roughly 7 million cable modem subscribers nationwide, in contrast to 3 million subscribers for DSL services." See "Bells Make a High-Speed Retreat from Broadband," The Wall Street Journal (October 29, 2001). Another estimate is 5.6 million cable modem subscribers compared to 3 million DSL subscribers. See FCC, In the Matter of Annual Assessment of the Status Competition in the Market for the Delivery of Video Programming, CS Docket No. 01-129, ¶ 44 (2002). During the fourth quarter of 2001, cable companies added about twice as many cable modem customers as the number of added DSL subscribers (542,000 versus 1 million-plus, latter based on numbers from the seven largest cable modem service providers).



dominant position. We note also that cable has the ability to expand its existing capacity for cable modem service by assigning additional bandwidth and/or by increasing the number of local "nodes" in its backbone network. Indeed, in our opinion, cable can more quickly—and cheaply—expand its capacity than can DSL providers.

Synthesis: Both large and small users (whether they are wholesale or retail customers) possess a variety of broadband supply alternatives that can and often do substitute for ILEC offerings. ILEC market shares in both the large and non-large user markets are inconsistent with market dominance and the ability to exercise individual market power. The existence of effective substitute alternatives implies low own-price demand elasticities for ILEC broadband offerings, again implying the inability to profit from any attempt to restrict market output. An expanding set of supply alternatives also belies any ILEC ability to restrict market output as it implies a high elasticity of supply. There is thus no basis to maintain that there is an ILEC dominance problem in broadband, whether manifested directly or via some alleged, but implausible, leveraging failure mode.

#### 4. HARMS OF REGULATION

Regulation, as is widely recognized, is at best an imperfect tool—not just in terms of its circumscribed ability to limit the adverse consequences derived from exercise of market power, but also in terms of its ability to produce or induce economically beneficial outcomes. The cure may well be worse than the disease particularly in circumstances where the malady is ephemeral and the disabilities of regulation are manifest—as in the instant case.

The Commission's famous, now defunct "Fin/Syn" rules provide an apt analogy.<sup>25</sup> These rules were an economically incoherent response to a perceived problem of broadcast network market power, but their maintenance became particularly difficult to rationalize when one of their unintended consequences was to limit growth of the most logical competitors—new networks aligned with movie studios (Fox, Paramount, Warner Brothers). Thus the unedifying spectacle of government regulations premised on control of market power having the plain and direct effect of maintaining whatever market power existed, by restraining the growth of competition.

<sup>&</sup>lt;sup>25</sup> See In re Review of the Financial Interest and Syndication Rules, MM Docket No. 95-39, Sections 73.659 (1995).



The Commission's miscategorization of ILECs as dominant suppliers of broadband services has the same kinds of adverse consequences. It limits the evolution of competitive alternatives to cable modem, competition that supplies the intellectual premise for light-handed regulation of cable system operators, notwithstanding compelling evidence of cable market power. It does so in two interrelated ways: (1) in subjecting ILEC offerings to a formal tariffing process, current regulations limit the expected economic returns ILECs can reasonably anticipate reaping and thus degrade ILEC incentives to invest and bear risk and potentially undermine their ability to get financing from capital markets, <sup>26</sup> and (2) by limiting ILEC flexibility to offer customized offerings and to partner strategically with customers (especially large businesses or public enterprises) to share financial risks and costs of developing innovative and strategically competitive applications, current regulations inhibit execution of efficient risk-sharing arrangements and minimization of risk, while simultaneously restricting the economic returns that can be realized.

Regulation necessarily imposes limitations on operating flexibility that thwart development of innovative transactional arrangements, inhibits the capacity to manage risk and, ultimately, restricts the growth of new service capabilities. The broadband "bandwagon" is stalled for want of innovative content/applications, but the transactionally simplistic models that underlie conventional tariffing models and arrangements have precisely the undesirable consequence of limiting creativity and the willingness to bear risk.

A fashion designer who operated under a "one-size-must-fit-all" constraint would presumably be hardput to recover the largely fixed design costs of a new couture collection. But this is what broadband regulation does—it limits the ILECs' flexibility to recover truly huge costs of broadband network development and deployment. If, in figurative essence, one size must fit all, it hardly pays to sink the required investments. But without the investments, the competition and innovation the Commission seeks cannot materialize. It would be one thing if these harms were offset by benefits, but they are not. Market power is not the problem—indeed, in the case of broadband and the ILECs, it is not even a problem; lack of a broadband "bandwagon" is the problem. The thrust of the Commission's policies should be to get the broadband "bandwagon" rolling, and deregulation is what that result requires.

<sup>&</sup>lt;sup>26</sup> These disincentive effects are exacerbated by the extreme unbundling and low-ball element pricing regime the Commission has heretofore judged reasonable and that is now the subject of a separate related proceeding.



#### 5. CONCLUSION

There is, in truth, no tension among the public policy objectives the Commission has identified—this is a case where eating the cake does not preclude one's still having it.

The implicit tradeoff embodied in the Commission's *Notice* is whether there is a sufficiently serious market-power problem associated with ILEC provision of broadband services to warrant imposition of what, given their gravely adverse consequences in terms of investment incentives, competition and innovation, are *very costly* regulatory controls.

Our analysis indicates that there is, in reality, no ILEC dominance problem in broadband. There exist lots of substitute alternatives in what we would suggest are two relevant product markets (large and mass market users) and barriers to service expansion are low in each of these markets, in part because substantial capital investments have already been sunk by a variety of different types of enterprises and as a result of service arrangements guaranteed by regulation. The irony is that the primary effect of current regulation is to thwart the development of effective competition to the currently dominant (and virtually unregulated) cable suppliers. There is thus very little public benefit that current ILEC broadband regulation can conceivably produce, but the harms it inflicts are manifest—less investment, less competition, less innovation, more regulation.

If the problem is insufficient competition, the answer cannot be regulation that thwarts competition. That is what current regulation does and, for that reason, it should be removed.

#### CERTIFICATE OF SERVICE

I, Samia Jana, do hereby certify that on this 1<sup>st</sup> day of March, 2002, true and correct copies of the foregoing Comments of Qwest Communications International Inc. will be delivered as indicated to the following parties:

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